

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
31 December 2003 (31.12.2003)

PCT

(10) International Publication Number
WO 2004/001615 A1

(51) International Patent Classification⁷: **G06F 13/10**

CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

(21) International Application Number:
PCT/SE2002/001225

(22) International Filing Date: 19 June 2002 (19.06.2002)

(25) Filing Language: English

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CI, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(26) Publication Language: English

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Declaration under Rule 4.17:

— *of inventorship (Rule 4.17(iv)) for US only*

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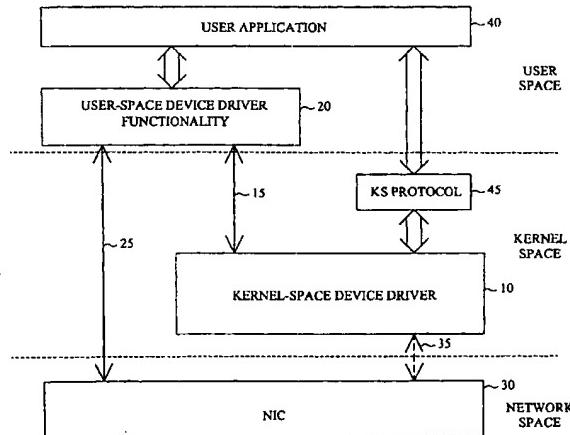
(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,

Published:

— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A NETWORK DEVICE DRIVER ARCHITECTURE



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(57) Abstract: The invention proposes a network device driver architecture with functionality distributed between kernel space and user space. The overall network device driver comprises a kernel-space device driver (10) and user-space device driver functionality (20). The kernel-space device driver (10) is adapted for enabling access to the user-space device driver functionality (20) via a kernel-space-user-space interface (15). The user-space device driver functionality (20) is adapted for enabling direct access between user space and the NIC (30) via a user-space-NIC interface (25), and also adapted for interconnecting the kernel-space-user-space interface (15) and the user-space-NIC interface (25) to provide integrated kernel-space access and user-space access to the NIC (30). The user-space device driver functionality (20) provides direct, zero-copy user-space access to the NIC, whereas information to be transferred between kernel space and the NIC will be "tunneled" through user space by combined use of the kernel-space device driver (10), the user-space device driver functionality (20) and the two associated interfaces (15,25).